Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A radiation-curable adhesive composition comprising at least one tackifier resin and at least one radiation-curable composition wherein said tackifier resin comprises monomer repeating units from at least one aromatic monomer and at least one acrylate monomer; wherein said radiation-curable composition can be cured by exposure to radiation, wherein said tackifier resin has a residual monomer concentration of less than about 600 ppm by weight based on the weight of said tackifier resin.

2. (Original) A radiation-curable adhesive composition according to claim 1 wherein said aromatic monomer is at least one selected from the group consisting of olefinic substituted aromatics.

3. (Original) A radiation-curable adhesive composition according to claim 2 wherein said aromatic monomer is selected from the group consisting of styrene, alpha-methyl styrene, vinyl toluene, indene, methylindenes, divinylbenzene, dicyclopentadiene, and methyl-dicyclopentadiene.

4. (Original) A radiation-curable adhesive composition according to claim 1 wherein said acrylate monomer has the general formula:

$$R_1–CH=CR_2–COOR_3$$

wherein R_1 is selected from the group consisting of hydrogen, aliphatic groups, and aromatic groups; wherein R_2 is selected from the group consisting of hydrogen, aliphatic

groups, and aromatic groups; and wherein R_3 is selected from the group consisting of hydrogen, aliphatic groups, aromatic groups.

5. (Original) A radiation-curable adhesive composition according to claim 4 wherein said aliphatic group has 1 to about 20 carbon atoms.

6. (Original) A radiation-curable adhesive composition according to claim 5 wherein said aliphatic group has 1 to 12 carbon atoms.

7. (Original) A radiation-curable adhesive composition according to claim 5 wherein said aromatic group has about 6 to about 20 carbon atoms.

8. (Original) A radiation-curable adhesive composition according to claim 5 wherein both R_1 and R_2 of the acrylate monomer is hydrogen.

9. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein said acrylate monomer is selected from the group consisting of methyl acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, n-hexyl acrylate, n-hexyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, n-heptyl acrylate, n-heptyl methacrylate, 2-methylheptyl(meth)acrylate, octyl acrylate, octyl methacrylate, isooctyl(meth)acrylate, n-nonyl(meth)acrylate, iso-nonyl(meth)acrylate, decyl(meth)acrylate, isodecyl acrylate, isodecyl methacrylate, dodecyl(meth)acrylate, isobornyl(meth)acrylate, lauryl methacrylate, lauryl acrylate, tridecyl acrylate, tridecyl methacrylate, stearyl acrylate, stearyl methacrylate, glycidyl methacrylate, acetoacetoxyethyl methacrylate, acetoacetoxyethyl acrylate, acetoacetoxypropyl methacrylate, acetoacetoxypropyl acrylate, diacetone acrylamide, acrylamide, methacrylamide, hydroxyethyl methacrylate, hydroxyethyl acrylate, allyl methacrylate, tetrahydrofurfuryl methacrylate, tetrahydrofurfuryl acrylate, cyclohexyl methacrylate, cyclohexyl acrylate, n-hexyl acrylate, n-hexyl methacrylate, 2-ethoxyethyl

acrylate, 2-ethoxyethyl methacrylate, isodecyl methacrylate, isodecyl acrylate, 2-methoxy acrylate, 2-methoxy methacrylate, 2-(2-ethoxyethoxy)ethylacrylate, 2-phenoxyethyl acrylate, 2-phenoxyethyl methacrylate, isobornyl acrylate, isobornyl methacrylate, caprolactone acrylate, caprolactone methacrylate, polypropyleneglycol monoacrylate, polypropyleneglycol monomethacrylate, poyethyleneglycol(400)acrylate, polypropyleneglycol(400)methacrylate, benzyl acrylate, benzyl methacrylate, acrylonitrile, and mixtures thereof.

10. (Original) A radiation-curable adhesive composition according to claim 1 wherein said acrylate monomer has up to about 20 carbon atoms.

11. (Original) A radiation-curable adhesive composition according to claim 10 wherein said acrylate monomer is selected from the group consisting of acrylic acid, 2-ethylhexyl acrylate, methyl methacrylate, methyl acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, n-hexyl acrylate, n-hexyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, n-heptyl acrylate, n-heptyl methacrylate, 2-methylheptyl(meth)acrylate, octyl acrylate, octyl methacrylate, isooctyl (meth)acrylate, n-nonyl(meth)acrylate, iso-nonyl(meth)acrylate, decyl(meth)acrylate, isodecyl acrylate, isodecyl methacrylate, dodecyl(meth)acrylate, isobornyl(meth)acrylate, hydroxyethyl methacrylate, hydroxyethyl acrylate, allyl methacrylate, cyclohexyl methacrylate, cyclohexyl acrylate, n-hexyl acrylate, n-hexyl methacrylate, isobornyl acrylate, isobornyl methacrylate, and mixtures thereof.

12. (Original) A radiation-curable adhesive composition according to claim 11 wherein said acrylate monomer is acrylic acid and 2-ethylhexyl acrylate.

13. (Original) A radiation-curable adhesive composition according to claim 1 wherein said acrylate monomer contains at least one functional group selected from the group

consisting of hydroxy, cycloaliphatic, acid, epoxide, amide, acrylonitril and acrylate groups.

14. (Original) A radiation-curable adhesive composition according to claim 1 wherein said tackifier resin is produced by a radical catalyzed polymerization process utilizing at least one initiator.

15. (Original) A radiation-curable adhesive composition according to claim 14 wherein said initiator is selected from the group consisting of diacyl peroxides, dialkyl peroxidicarbonates, tert-alkyl peroxyesters, di-tert-alkyl peroxides, tert-alkyl hydroperoxides, ketone peroxides, and mixtures thereof.

16. (Canceled)

17. (Previously Presented) A radiation-curable adhesive composition according to Claim 1 wherein said tackifier resin is produced by a process comprising contacting a tackifier resin product stream with at least one carrier at a temperature sufficient to remove a portion of the residual monomers.

18. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein said tackifier resin does not significantly decrease the moisture vapor transport rate of said radiation-curable adhesive composition.

19. (Original) A radiation-curable adhesive composition according to claim 18 wherein said tackifier resin does not decrease the moisture vapor transport rate of said radiation-curable adhesive composition by more than 25%.

20. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein the moisture vapor transport rate of said radiation-curable adhesive

composition is the same or increased over said radiation-curable composition alone.

21. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein the moisture vapor transport rate of said radiation-curable adhesive composition ranges from about 200 to about 3000.

22. (Original) A radiation-curable adhesive composition according to claim 21 wherein the moisture vapor transport rate of said radiation-curable adhesive composition ranges from about 500 to 1500.

23. (Canceled)

24. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein said residual monomer concentration of said tackifier resin is less than about 300 ppm by weight based on the weight of said tackifier resin.

25. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein said residual monomer concentration of said tackifier resin is less than about 200 ppm aromatic monomer based on the weight of said tackifier resin and less than about 400 ppm acrylic monomer.

26. (Original) A radiation-curable adhesive composition according to claim 25 wherein said residual monomer concentration of said tackifier resin is less than about 100 ppm by weight aromatic monomer and less than about 150 ppm by weight acrylic monomer.

27. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein said tackifier resin has a residual solvent level less than about 500 ppm by weight based on the weight of said tackifier resin.

28. (Original) A radiation-curable adhesive composition according to claim 1 wherein the amount of aromatic monomer repeating units in the tackifier resin ranges from about 20% to about 70% based on the total amount of monomer repeating units in the tackifier resin.

29. (Original) A radiation-curable adhesive composition according to claim 1 wherein the amount of acrylate monomer repeating units in said tackifier resin ranges from about 30% to about 80% based on the total amount of monomer repeating units in the tackifier resin.

30. (Original) A radiation-curable adhesive composition according to claim 1 wherein said tackifier resin has a R&B softening point ranging from being a liquid at room temperature to about 180°C.

31. (Original) A radiation-curable adhesive composition according to claim 1 wherein said acid number of said tackifier resin ranges from about 0 to about 300 mg KOH/g resin.

32. (Original) A radiation-curable adhesive composition according to claim 1 wherein said hydroxyl number of said tackifier resin ranges from about 0 to about 300.

33. (Original) A radiation-curable adhesive composition according to claim 1 wherein the MMAP cloud point of said tackifier resin is less than 50°C.

34. (Original) A radiation-curable adhesive composition according to claim 1 wherein the number average molecular weight (Mn) of said tackifier resin ranges from about 1,500 to about 7,000 daltons.

35. (Original) A radiation-curable adhesive composition according to claim 1 wherein the number average molecular weight (Mn) of said tackifier resin ranges from 2,000 to 4,000 daltons.

36. (Original) A radiation-curable adhesive composition according to claim 1 wherein the weight average molecular weight (Mw) of the tackifier resin ranges from about 2,000 to about 25,000 daltons.

37. (Original) A radiation-curable adhesive composition according to claim 1 wherein the weight average molecular weight (Mw) of the tackifier resin ranges from 3,000 to 10,000.

38. (Original) A radiation-curable adhesive composition according to claim 1 wherein the z-average molecular weight (Mz) of said tackifier resin ranges from about 3,000 to about 75,000 daltons.

39. (Original) A radiation-curable adhesive composition according to claim 1 wherein the z-average molecular weight (Mz) of said tackifier resin ranges from 5000 to 20000.

40. (Original) A radiation-curable adhesive composition according to claim 1 wherein the Gardner color of said tackifier resin is less than 5.

41. (Original) A radiation-curable adhesive composition according to claim 1 wherein said tackifier resin has an aromaticity of 45% or higher and an acid number of 100 mg KOH/g resin or lower.

42. (Original) A radiation-curable adhesive composition according to claim 1 wherein said tackifier resin has a softening point of 80°C or higher.

43. (Previously Presented) A radiation-curable adhesive composition according to claim 1 wherein said tackifier resin comprises repeating units from at least one monomer selected from the group consisting of styrene, acrylic acid, and 2-ethylhexyl acrylate.

44. (Original) A radiation-curable adhesive composition according to claim 43 wherein the amount of styrene repeating units ranges from 0 to 100% based on the total amount of monomer repeating units in the tackifier resin.

45. (Original) A radiation-curable adhesive composition according to claim 44 wherein the amount of acrylic acid and 2-ethylhexyl acrylate ranges from 0-100% based on the total amount of monomer repeating units in the tackifier resin.

46. (Previously Presented) A radiation-curable adhesive composition according to claim 43 wherein said tackifier resin comprises repeating units of styrene and repeating units of acrylic acid and/or 2-ethylhexyl acrylate, and wherein the amount of styrene repeating units ranges from about 20% to about 70% based on the total amount of monomer repeating units in said tackifier resin, and the combined amount of acrylic acid repeating units, if present, and 2-ethylhexyl acrylate repeating units, if present, ranges from about 30% to about 80%.

47. (Original) A radiation-curable adhesive composition according to claim 1 wherein said radiation-curable composition is at least one selected from the group consisting of acrylic compositions, epoxides, urethanes, hybrid compositions, isoprene compositions, and styrene block copolymers.

48. (Original) A radiation-curable adhesive composition according to claim 47 wherein said acrylic compositions are selected from acrylic monomers, acrylic oligomers, and acrylic polymers.

49. (Original) A radiation-curable adhesive composition according to claim 48 wherein said acrylic monomer is at least one selected from the group consisting of acrylic acid, 2-ethylhexyl acrylate, methyl methacrylate, methyl acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, n-hexyl acrylate, n-hexyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, n-heptyl acrylate, n-heptyl methacrylate, 2-methylheptyl(meth)acrylate, octyl acrylate, octyl methacrylate, isooctyl(meth)acrylate, n-nonyl(meth)acrylate, iso-nonyl(meth)acrylate, decyl(meth)acrylate, isodecyl acrylate, isodecyl methacrylate, dodecyl(meth)acrylate, isobornyl(meth)acrylate, hydroxyethyl; methacrylate, hydroxyethyl acrylate, allyl methacrylate, cyclohexyl methacrylate, cyclohexyl acrylate, n-hexyl acrylate, n-hexyl methacrylate, isobornyl acrylate, isobornyl methacrylate, and mixtures thereof.

50. (Original) A radiation-curable adhesive composition according to claim 48 wherein said acrylic oligomers comprise at least one repeating unit selected from the group consisting of acrylic acid, 2-ethylhexyl acrylate, methyl methacrylate, methyl acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, n-hexyl acrylate, n-hexyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, n-heptyl acrylate, n-heptyl methacrylate, 2-methylheptyl(meth)acrylate, octyl acrylate, octyl methacrylate, isooctyl(meth)acrylate, n-nonyl(meth)acrylate, iso-nonyl(meth)acrylate, decyl(meth)acrylate, isodecyl acrylate, isodecyl methacrylate, dodecyl(meth)acrylate, isobornyl(meth)acrylate, hydroxyethyl methacrylate, hydroxyethyl acrylate, allyl methacrylate, cyclohexyl methacrylate, cyclohexyl acrylate, n-hexyl acrylate, n-hexyl methacrylate, isobornyl acrylate, isobornyl methacrylate, and mixtures thereof.

51. (Original) A radiation-curable adhesive composition according to claim 48 wherein said acrylic polymers include both homopolymers, copolymers, and terpolymers produced from at least one monomer selected from the group consisting of methyl

acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, n-hexyl acrylate, n-hexyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, n-heptyl acrylate, n-heptyl methacrylate, 2-methylheptyl(meth)acrylate, octyl acrylate, octyl methacrylate, isooctyl(meth)acrylate, n-nonyl(meth)acrylate, iso-nonyl(meth)acrylate, decyl(meth)acrylate, isodecyl acrylate, isodecyl methacrylate, dodecyl(meth)acrylate, isobornyl(meth)acrylate, lauryl methacrylate, lauryl acrylate, tridecyl acrylate, tridecyl methacrylate, stearyl acrylate, stearyl methacrylate, glycidyl methacrylate, alkyl crotonates, vinyl acetate, di-n-butyl maleate, di-octylmaleate, acetoacetoxyethyl methacrylate, acetoacetoxyethyl acrylate, acetoacetoxypropyl methacrylate, acetoacetoxypropyl acrylate, diacetone acrylamide, acrylamide, methacrylamide, hydroxyethyl methacrylate, hydroxyethyl acrylate, allyl methacrylate, tetrahydrofurfuryl methacrylate, tetrahydrofurfuryl acrylate, cyclohexyl methacrylate, cyclohexyl acrylate, n-hexyl acrylate, n-hexyl methacrylate, 2-ethoxyethyl acrylate, 2-ethoxyethyl methacrylate, isodecyl methacrylate, isodecyl acrylate, 2-methoxy acrylate, 2-methoxy methacrylate, 2-(2-ethoxyethoxy)ethylacrylate, 2-phenoxyethyl acrylate, 2-phenoxyethyl methacrylate, isobornyl acrylate, isobornyl methacrylate, caprolactone acrylate, caprolactone methacrylate, polypropyleneglycol monoacrylate, polypropyleneglycol monomethacrylate, poyethyleneglycol(400)acrylate, polypropyleneglycol(400)methacrylate, benzyl acrylate, benzyl methacrylate, sodium 1-allyloxy-2-hydroylpropyl sulfonate, acrylonitrile, and mixtures thereof.

52. (Original) A radiation-curable adhesive composition according to claim 48 wherein said acrylic polymers comprise repeating units from acrylic monomers and at least one polar copolymerizable monomers.

53. (Original) A radiation-curable adhesive composition according to claim 52 wherein said polar copolymerizable monomer is at least one selected from the group consisting of cyanoalkyl acrylates, acrylamides, substituted acrylamides, N-vinyl

pyrrolidone, N-vinyl caprolactam, acrylonitrile, vinyl chloride, vinylidene chloride, diallyl phthalate, and mixtures thereof.

54. (Previously Presented) A radiation-curable adhesive composition according to claim 48 wherein said radiation-curable acrylic polymers are selected from the group consisting of acrylic copolymers, acrylated polyethers, acrylated polyester-based polyurethanes, methacrylated polyesters, and acrylated epoxies.

55. (Original) A radiation-curable adhesive composition according to claim 54 wherein said radiation-curable acrylic polymer is a ultraviolet light reactive, solvent free acrylic copolymer with a Tg of less than or equal to about -32°C or lower and a viscosity of less than or equal to about 24000 mPa.s at 120°C.

56. (Original) A radiation-curable adhesive composition according to claim 1 wherein the amounts of said tackifier resin ranges from about 0.1% to about 50% based on the weight of the radiation-curable adhesive composition.

57. (Original) A radiation-curable adhesive composition according to claim 56 wherein the amounts of tackifier resin ranges from 0.1% to 25% based on the weight of the radiation-curable adhesive composition.

58. (Original) A radiation-curable adhesive composition according to claim 1 further comprising at least one photo-initiator.

59. (Original) A radiation-curable adhesive composition according to claim 1 further comprising at least one crosslinking agent.

60. (Original) A radiation-curable adhesive composition according to claim 1 further comprising at least one additive selected the group consisting of from reinforcing agents, fire retardants, foaming agents, conventional tackifiers, plasticizers, oils,

antioxidants, polymers, curable/reactive monomers, crosslinking agents, fillers, and pigments.

61-62. (Canceled)

63. (Previously Presented) A process of making a radiation-curable adhesive composition, said process comprising providing at least one tackifier resin and at least one radiation-curable composition wherein said tackifier resin comprises monomer repeating units from at least one aromatic monomer and at least one acrylate monomer, wherein said tackifier resin has a residual monomer concentration of less than about 600 ppm by weight based on the weight of said tackifier resin.

64-70. (Canceled)

71. (Original) An article comprising said radiation-curable adhesive composition of claim 1.

72-81. (Canceled)